

IN THE CLAIMS:

Claims 2-9, 11 and 17-19 were previously cancelled without prejudice. Please now cancel claim 20 without prejudice, add new claim 29 and amend the claims as follows.

1. (Currently Amended) A method, comprising:
 - acquiring, or retrieving from storage, ~~seismic data representative of one or more~~ acceleration wavefield traces;
 - applying a gain recover to the acceleration wavefield traces-~~seismic data~~;
 - applying a normal moveout correction to the acceleration wavefield traces ~~seismic data~~;
 - muting the acceleration wavefield traces-~~seismic data~~;
 - stacking the acceleration wavefield traces-~~seismic data~~; and
 - applying a time migration to the acceleration wavefield traces-~~seismic data~~.
- 2-9. (Cancelled)
10. (Currently Amended) An apparatus, comprising:
 - an input interface for receiving ~~seismic data representative of one or more~~ acceleration wavefield traces;
 - a data processor; and
 - memory comprising program instructions executable by the processor to:
 - acquire ~~seismic data representative of the~~ acceleration wavefield traces;
 - apply a gain recover to the acceleration wavefield traces-~~seismic data~~;
 - apply a normal moveout correction to the acceleration wavefield traces ~~seismic data~~;
 - mute the acceleration wavefield traces-~~seismic data~~;
 - stack the acceleration wavefield traces-~~seismic data~~; and
 - apply a time migration to the acceleration wavefield traces-~~seismic data~~.
11. (Cancelled)

12. (Currently Amended) A seismic surveying arrangement comprising:
a seismic source for emitting seismic energy;
a seismic receiver for acquiring seismic data representative of the acceleration wavefield traces, the seismic receiver being spaced from the seismic source; and
an apparatus as claimed in claim 10 for processing seismic data the acceleration wavefield traces acquired by the receiver.
13. (Original) A seismic surveying arrangement as claimed in claim 12 wherein the seismic source and the receiver are each disposed at or on the earth's surface.
14. (Original) A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed at or on the earth's surface and the receiver is disposed within a borehole.
15. (Original) A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed in a water column and the receiver is located at the base of the water column.
16. (Original) A seismic surveying arrangement as claimed in claim 12 wherein the seismic source is disposed in a water column and the receiver is disposed within a borehole.
- 17-20. (Cancelled)
21. (Currently Amended) The method of claim 1, further comprising removing an effect of a signature of the source used to acquire the acceleration wavefield traces seismic data.
22. (Currently Amended) The method of claim 1, further comprising removing coherent noise from the acceleration wavefield traces seismic data.

23. (Currently Amended) The method of claim 1, further comprising applying a demultiple algorithm to remove events that involve multiple passes through a water column in which a receiver used to acquire the acceleration wavefield traces seismic data is disposed.
24. (Currently Amended) The method of claim 1, further comprising applying a trace equalization algorithm to the acceleration wavefield traces seismic data.
25. (Previously Presented) The method of claim 1, further comprising applying a pre-stack deconvolution algorithm to attenuate short period of reverberations.
26. (Previously Presented) The method of claim 1, further comprising applying a post-stack deconvolution algorithm to whiten a signal spectrum.
27. (Currently Amended) The method of claim 26, further comprising applying a time-varying bandpass filter to the acceleration wavefield traces seismic data.
28. (Currently Amended) The method of claim 1, further comprising equalizing amplitudes of the stacked acceleration wavefield traces seismic data.
29. (New) A method, comprising:
- acquiring, or retrieving from storage, seismic data representative of only acceleration wavefield traces;
 - applying a gain recover to the seismic data;
 - applying a normal moveout correction to the seismic data;
 - muting the seismic data;
 - stacking the seismic data; and
 - applying a time migration to the acceleration wavefield traces.